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(71) Applicant: FUTABA CORP

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SAKAKIBARA KENJU  
ITO SHIGEO

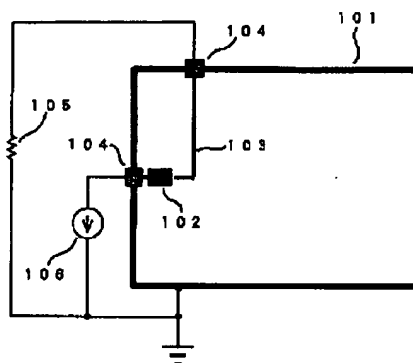
## (54) ELECTRON EMITTING SOURCE AND MANUFACTURE THEREOF

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### (57) Abstract:

**PROBLEM TO BE SOLVED:** To provide an easy manufacturing method of an electron emitting source.

**SOLUTION:** A negative electrode 102 is locally heated by carrying an arc electric current of DC 100 A and arc-discharging for a second in a chamber 101 of an He atmosphere under a pressure of 1 Pa. Negative electrode material for forming the negative electrode 102 is scattered and particles with a lot of carbon nanotubes formed on the surface are generated. The particles are collected and used as an emitter of the electron emitting source.





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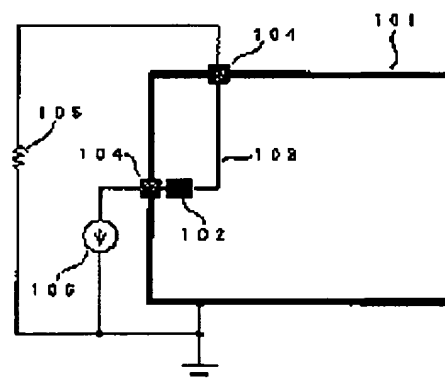
(11) Publication number: **20002230**(43) Date of publication of application: **11.08.2**(51) Int. Cl. **H01J 9/02****B01J 19/08, C01B 31/02, H01J 1/304**(21) Application number: **11059142**(22) Date of filing: **31.01.1999**(71) Applicant: **FUTABA CORP**(72) Inventor: **TAKIGAWA HIROSHI  
SAKAKIBARA KENJU  
ITO SHIGEO**(54) **ELECTRON EMITTING SOURCE AND  
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🔍 Title: **JP2000223012A2: ELECTRON EMITTING SOURCE AND MANUFACTURE THEREOF**

🔍 Derwent Title: Manufacture of source for electron emission, involves heating particle formation material at predetermined atmosphere and adhering the formed particle to a substrate [\[Derwent Record\]](#)

🔍 Country: JP Japan

🔍 Kind: A2 Document Laid open to Public inspection i

🔍 Inventor: TAKIGAWA HIROSHI;  
SAKAKIBARA KENJU;  
ITO SHIGEO;

🔍 Assignee: FUTABA CORP  
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🔍 Published / Filed: 2000-08-11 / 1999-01-31

🔍 Application Number: JP1999000059142

🔍 IPC Code: [H01J 9/02](#); [B01J 19/08](#); [C01B 31/02](#); [H01J 1/304](#);

🔍 Priority Number: 1999-01-31 JP1999000059142


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🔍 Family: None

🔍 Forward References: **Go to Result Set: Forward references (1)**

PDF	Patent	Pub.Date	Inventor	Assignee	Title
	<a href="#">US6848962</a>	2005-02-01	Kitamura; Shin	Canon Kabushiki Kaisha	<a href="#">Electron-emitting device, electron image-forming apparatus, and method of producing electron-emitting device</a>

🔍 Other Abstract Info: [CHEMABS 133\(12\)171172B](#) [CHEMABS 133\(12\)171172B](#) [DERABS C2000-596841](#) [DE C2000-596841](#)



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